



Clinical Laboratory based Diagnostics and Medicine

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Cellular Pathology



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Newcastle



Healthcare at its very best - with a personal touch



- Newcastle upon Tyne Hospitals NHS Foundation Trust (NUTH) is recognised nationally as a **centre for healthcare excellence** and provides a broader range of specialist services than any other group of Hospitals outside of London.
- The Trust is the nation's **top performing Trust with regard to clinical trials and a pioneer of Research and Development**, supporting initiatives such as the Molecular Pathology Node and the National Institute for Healthcare Research (NHIR) funded, Medtech and In-vitro Diagnostic Co-operative (MIC).
- **'Integrated Laboratory Medicine'** including disciplines of Cellular Pathology, Blood Sciences, Immunology, Microbiology (including PHE) and Genetics.
- This complex interaction and network of **specialist services**, together with clinical and academic integration, is unparalleled anywhere in the region and differentiates the service provided by NUTH, from all other Trusts within the North East.

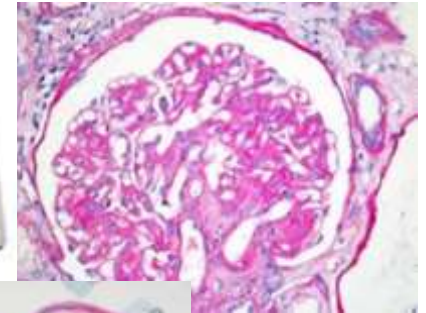
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Cellular Pathology Overview

The department of Cellular Pathology NUTH is comprised of the following primary disciplines:

- Histology
- Neuropathology
- Cytology
- Mortuary and Forensic services
- Node Research Proximity Laboratory



Supported by office administration and IT.

The department is ISO15189:2012 Accredited, HTA licensed and one of the largest laboratories in the UK. We offer national and regional referrals for all specialist teams.

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- The department processes approximately 58K histology samples, 45K gynae cytology samples, 5K non-gynae cytology and up to 2000 forensic and post mortem cases.
- We have a dedicated team of 35 Consultants with specialist expertise, we are a training school for specialist training (ST) medics. We work closely with the university and have academic pathologists covering all areas of Cellular Pathology.
- We have 120 skilled non-medical staff including Managers, Advanced Practitioners, Biomedical Scientists, Health Care Scientist Associates, IT and Clerical staff.
- We have a purpose built laboratory which is well-equipped.



Training

- We have a robust induction, training and competency process in accordance with accreditation and our professional bodies.
- We have skill mixed to allow enhanced roles and career development of staff across all levels.
- Staff engagement, communication and well-being is core to our service delivery as a team.





Routine Services available...

- Specimen Dissection
- Specimen Processing
- Embedding
- Microtomy and Cryotomy
- Staining
- Muscle and Nerve service
- Immunofluorescence
- Immunohistochemistry-
single and dual staining
- Electron Microscopy
- Neuropathology
- Sterile-technique for
downstream genomic and
molecular testing
- In-situ Hybridisation
- Frozen tissue handling
- 100K Genomes
techniques
- Cytological preparations



The Newcastle upon Tyne Hospitals



NHS Foundation Trust

The Newcastle MRC/EPSRC Molecular Pathology Node



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Services from the Node



Roche Discovery Ultra: Bespoke automated tissue assays including RNA scope



Perkin Elmer Vectra Automated Quantitative Pathology Imaging System

ZEISS laser capture microdissection microscope



Tissue Microarray Construction - TMA Grand Master, 3DHISTECH.





Achievements



Proximity



**Proximity
Research
Laboratory**

Established in clinical pathology department

Multi-dimensional imaging and analysis

**Increased
collaboration**

Industry, related platforms (DEC; MIC) and UK Pathology Nodes



Path



People

43 projects completed
22 projects in progress



So what do these benefits
mean???

OPPORTUNITY

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Optimal Tissue Diagnostics

- Established well-trained staff
- Modern well-equipped laboratory
- Advisory service, panel reviewed projects and technical requests
- Standardised practices within a reputable, accredited quality diagnostic service
- Optimal tissue usage, resource pool
- Patient focused



Pathology Wide Services

- Integrated Directorate
- Academic Pathology Linked
- Collaboratively focused
- Dedicated Business Unit
- Pathology IT support – data provision and statistical support
- Sustainability and Transformation Plan
'Hub' Laboratory



Innovative Diagnostics



Engaged with national change

Established patient pathways developing with bringing novel techniques to benefit treatment stratification